

Fig. 1

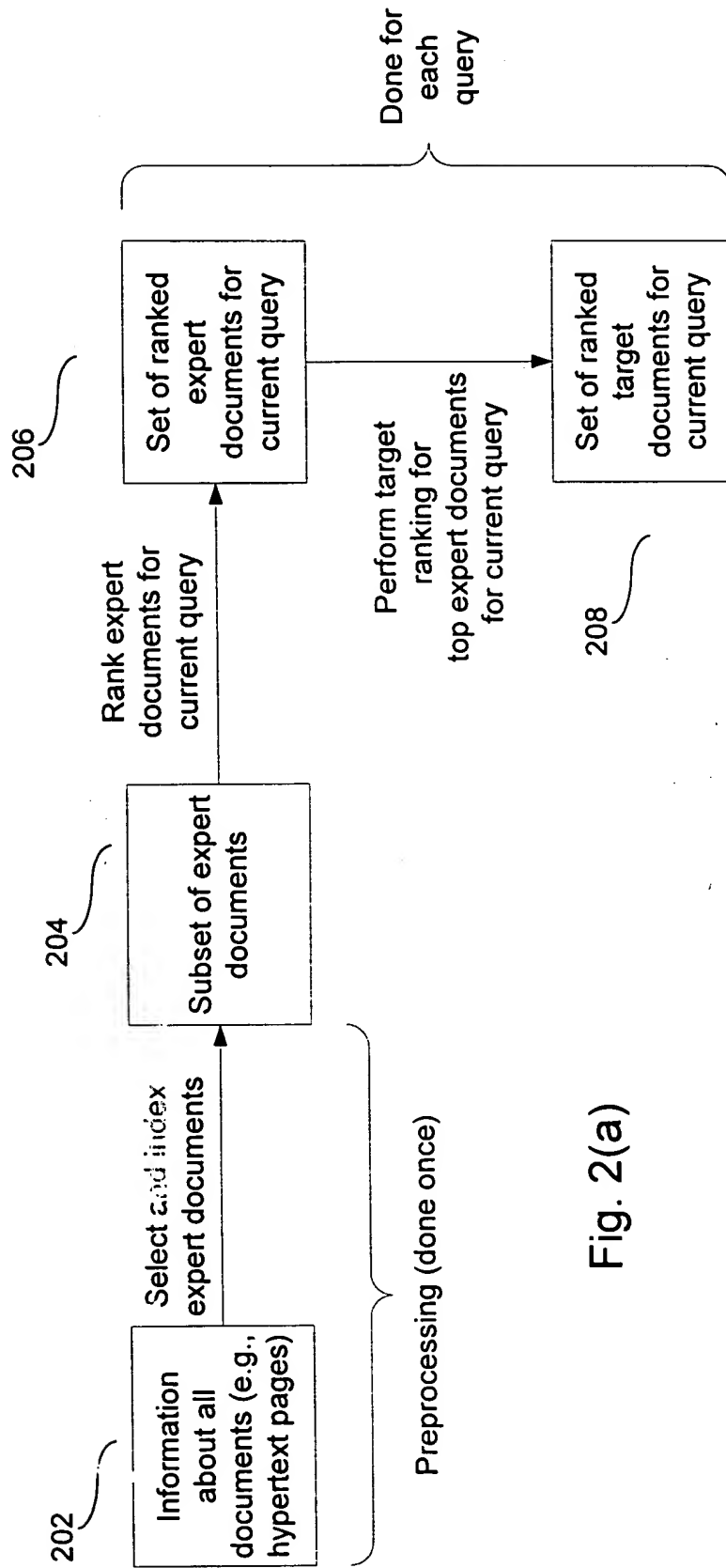
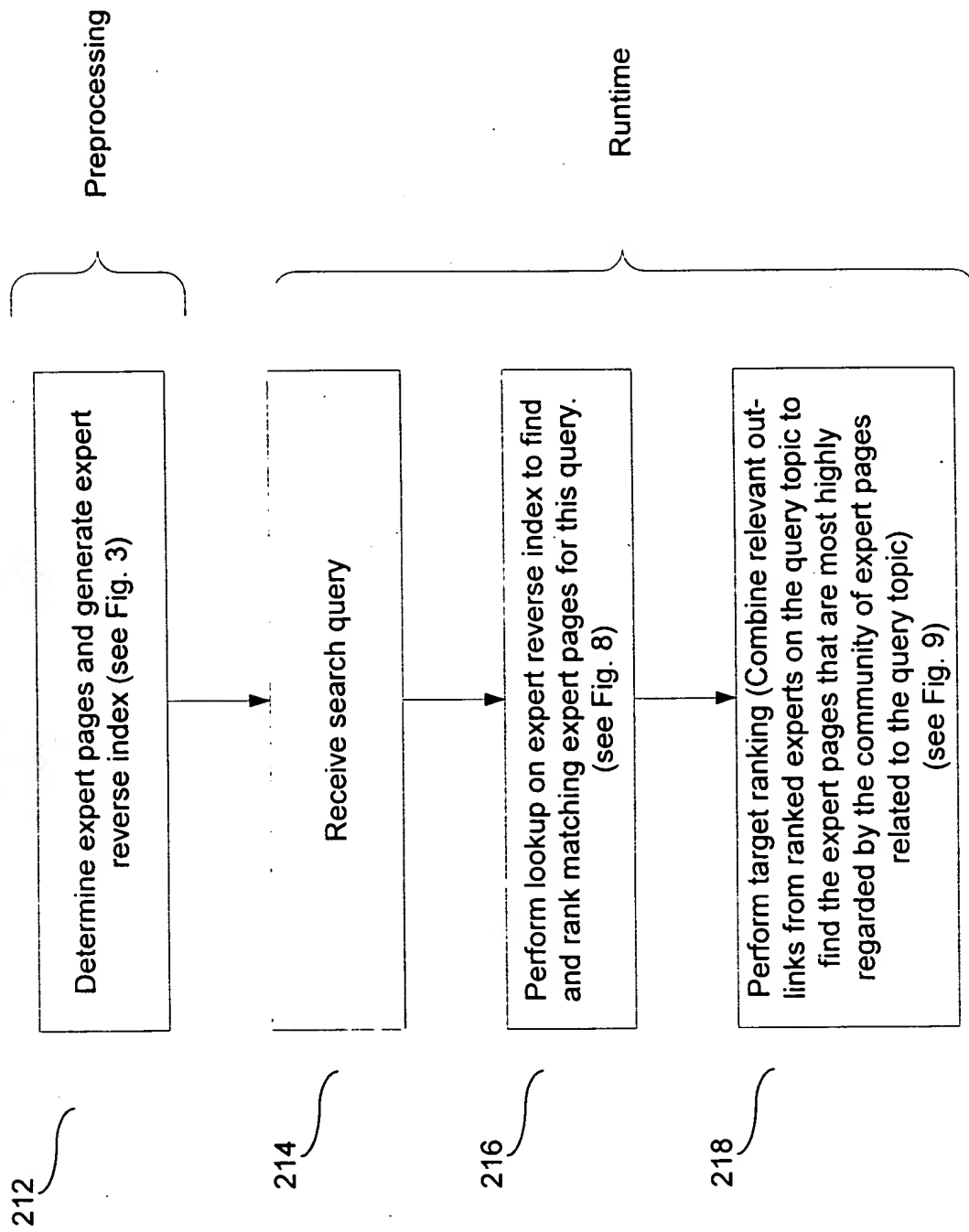
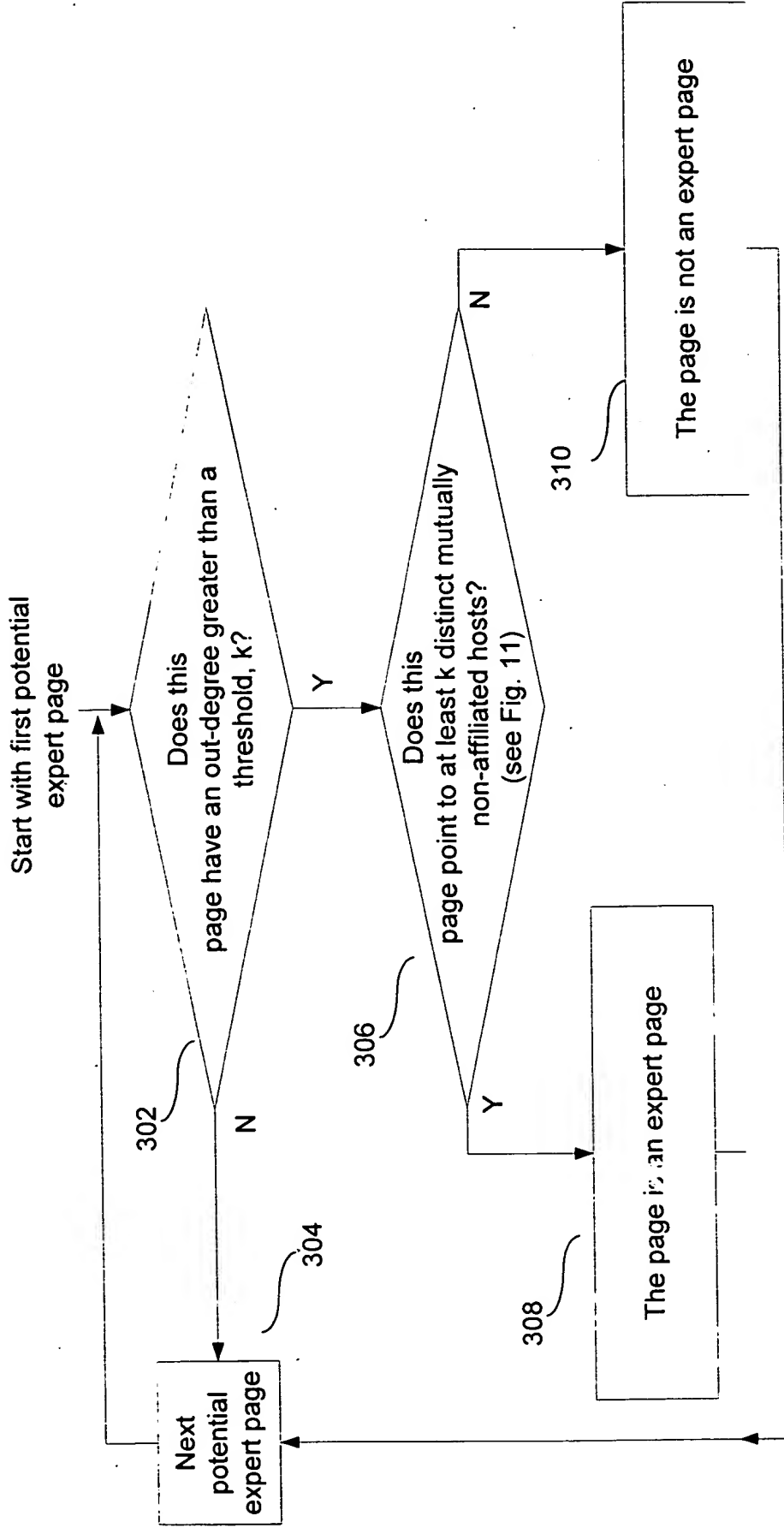


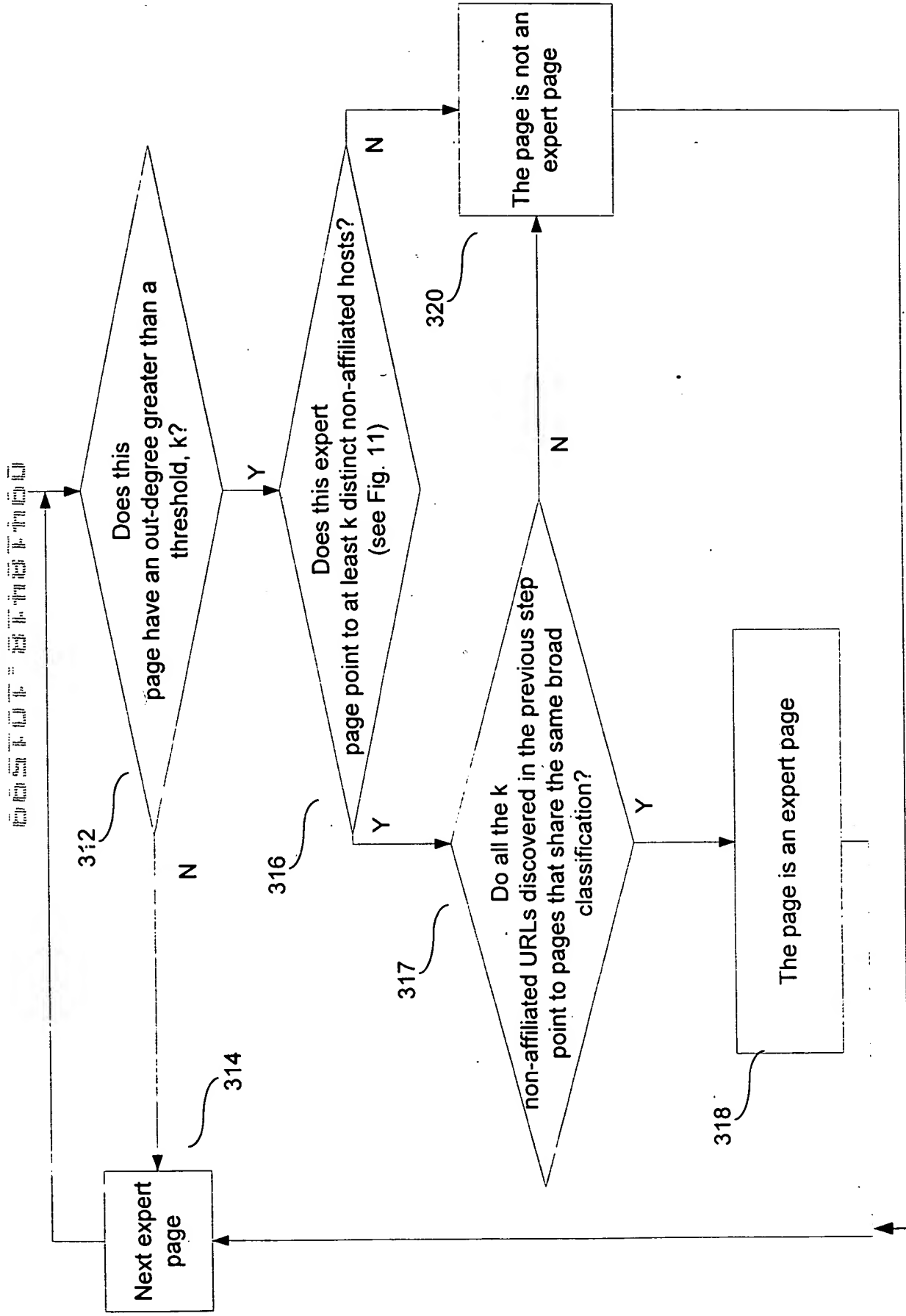
Fig. 2(a)



Responding to a Search Query
Fig. 2(b)

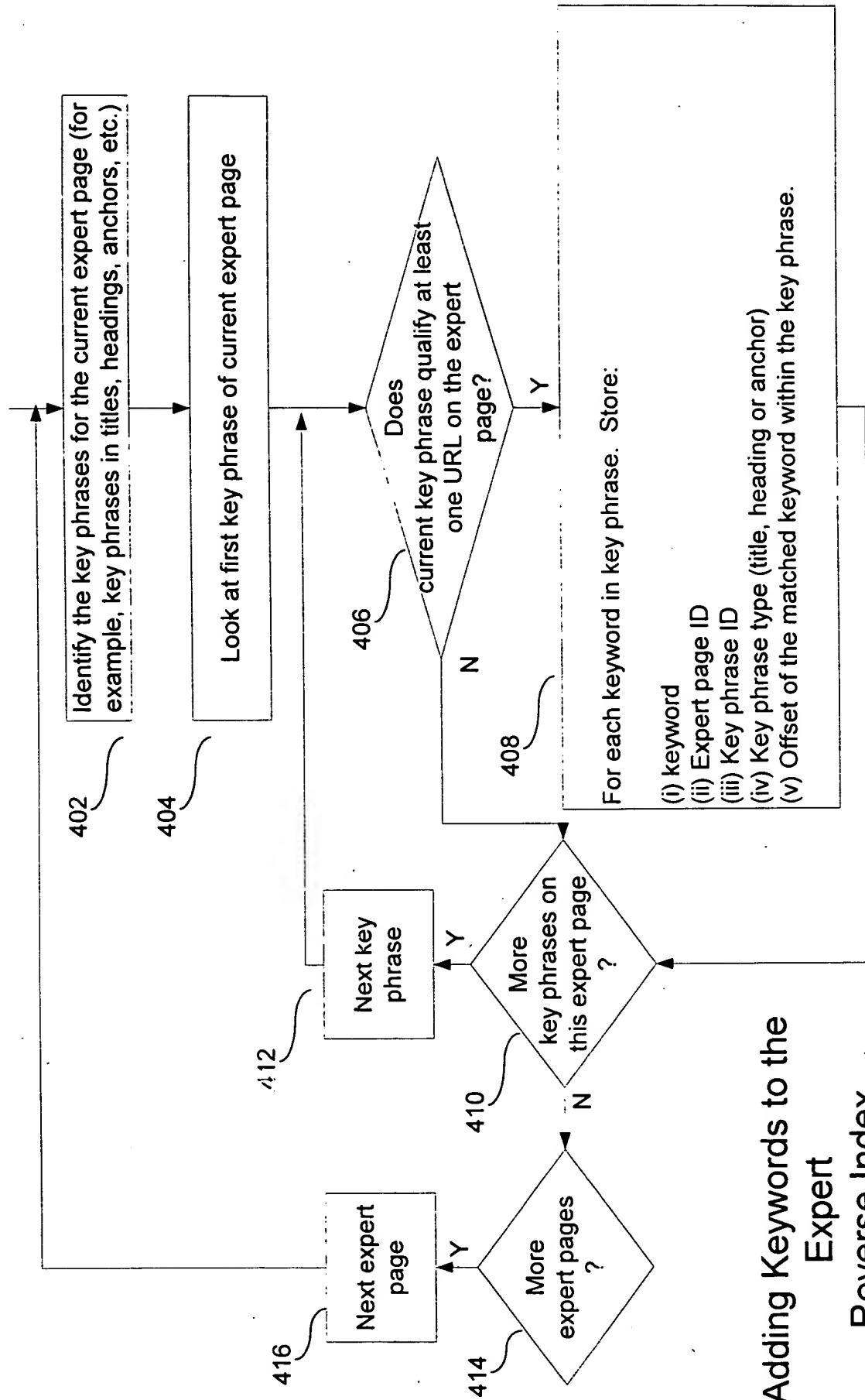


Determining Expert Pages
Fig. 3(a)



Determining Expert Pages
Fig. 3(b)

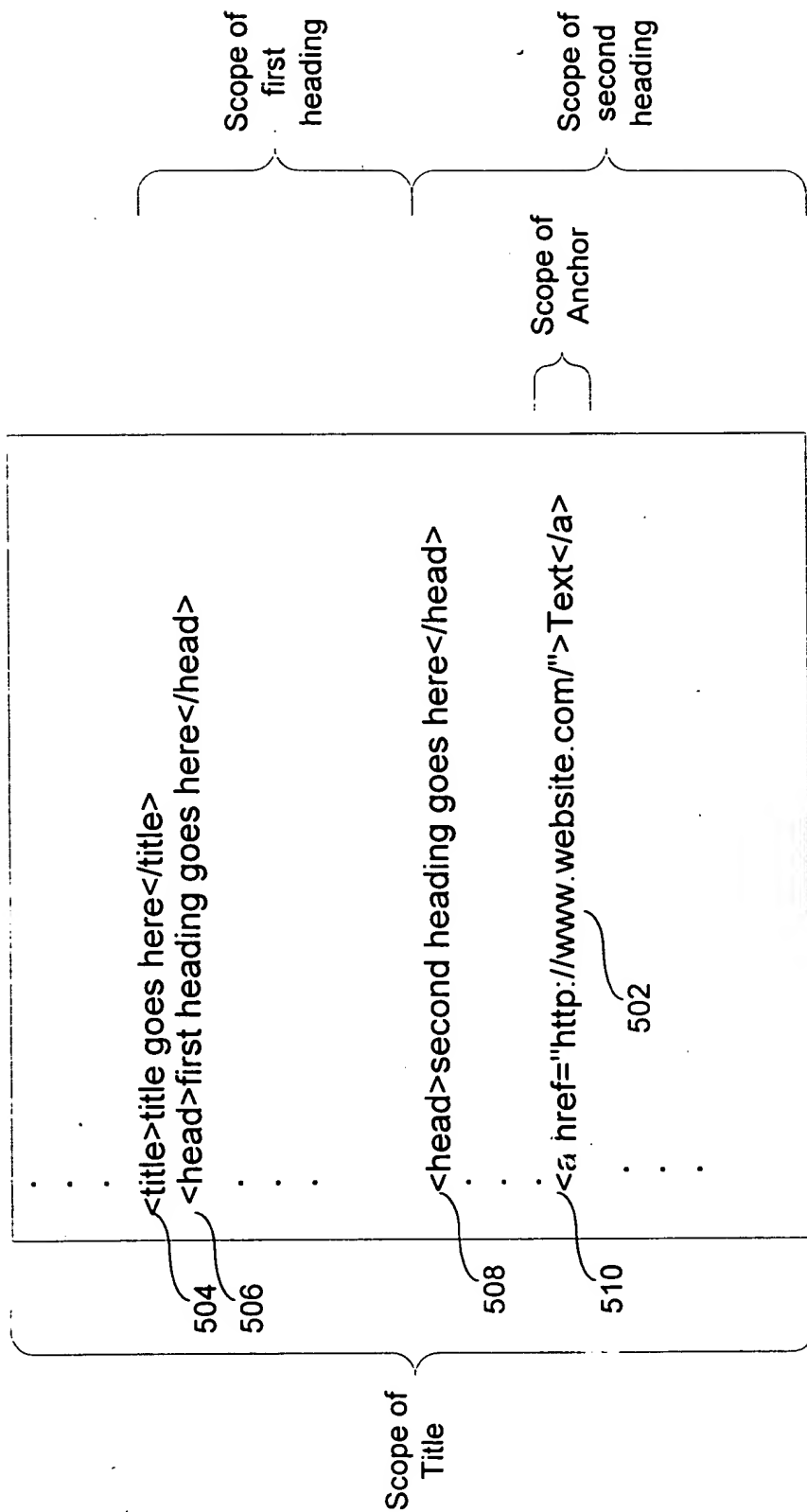
Start with first expert page



Adding Keywords to the
Expert
Reverse Index

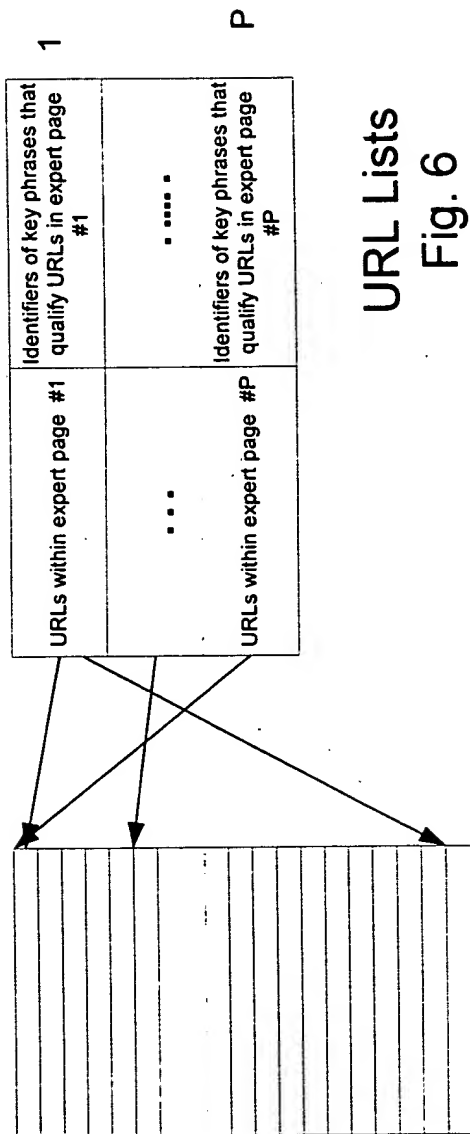
Fig. 4

An expert page



Scope of Key Phrases
(URLs in scope of a key phrase are "qualified" by the key phrase)
Fig. 5

Global URL list



URL Lists
Fig. 6

keyword	Expert page ID	Key phrase ID	Key phrase type	Offset of keyword within key phrase
1				
...
M				

Example Expert Reverse Index
Fig. 7

Start with first key phrase of first expert page

802

804

For current key phrase: determine level score of key phrase in accordance with the type of key phrase (title, header, anchor, etc.)

For current key phrase and current expert page: determine fullness factor for <key phrase, query> as follows:

If $m \leq 2$, FullnessFactor(key phrase, query) = 1

If $m > 2$, FullnessFactor(key phrase, query) = $1 + (2-m)/plen$

where m is the number of terms in the key phrase that are not in the query (i.e., surplus terms in key phrase) and $plen$ is the length of the key phrase

806

If key phrase has all query terms: Add (LevelScore (key phrase) * FullnessFactor(key phrase, query)) to running total S0 for expert page

If key phrase has all but 1 query term: Add (LevelScore (key phrase) * FullnessFactor(key phrase, query)) to running total S1 for expert page

If key phrase has all but 2 query terms: Add (LevelScore (key phrase) * FullnessFactor(key phrase, query)) to running total S2 for expert page

So, S0, S1, S2 make up an ExpertScore(E) for this expert.

810

Ranking Expert Pages for a Current Query

Fig. 8

Rank experts according to their S0, S1, S2 scores

More key phrases in expert page?

More expert pages to rank?

Next key phrase on expert page

Next expert page; first key phrase on expert page; Clear S0, S1, S2 for expert page

808

812

816

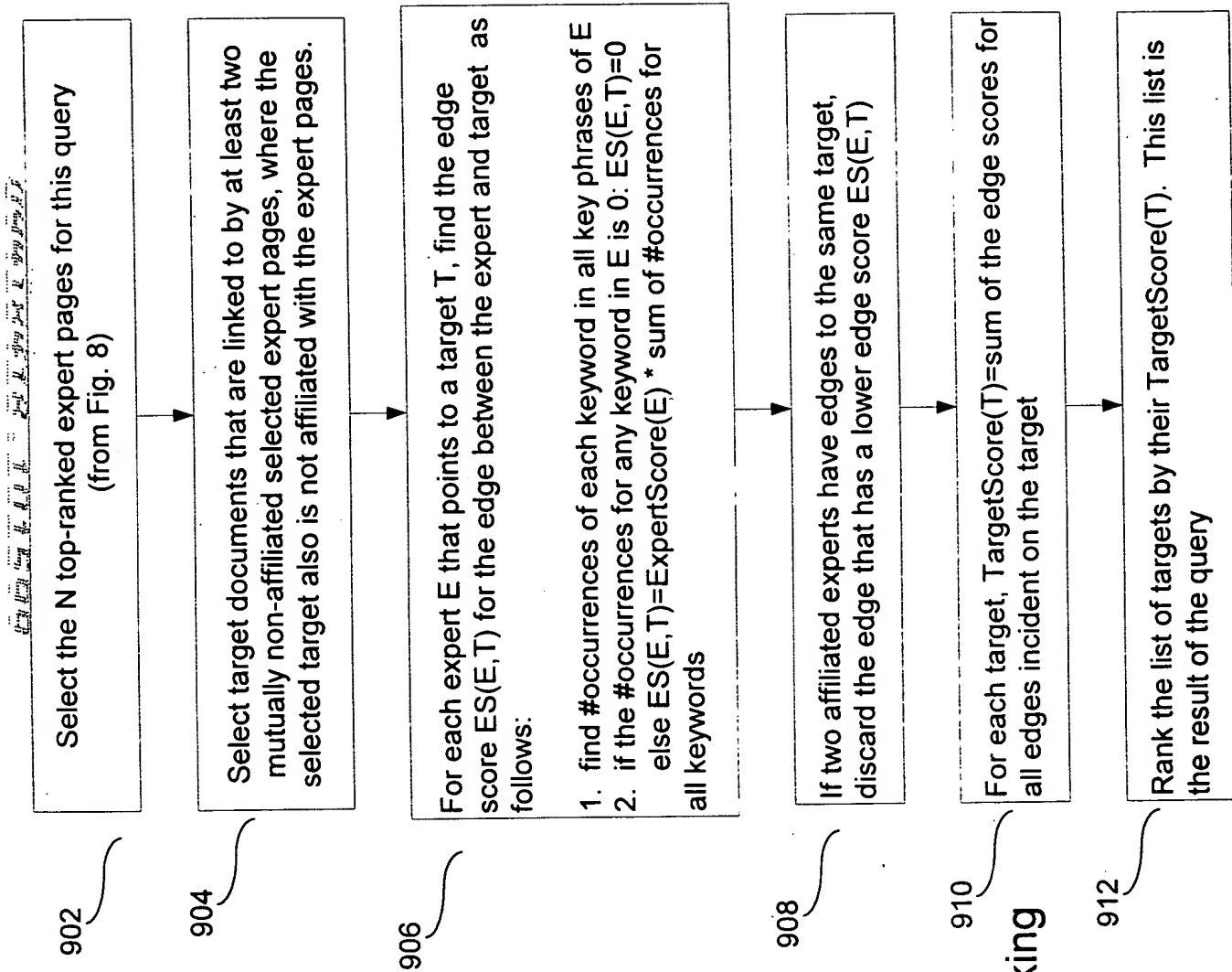
814

Y

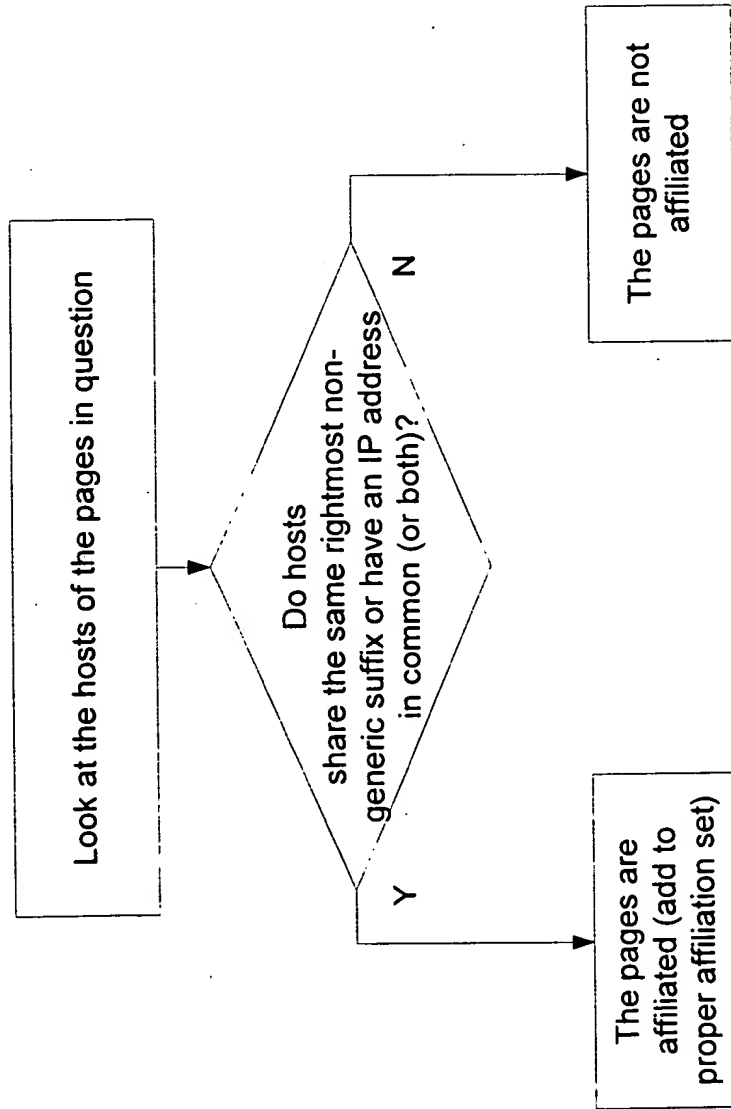
N

Y

N



Target Ranking
Fig. 9



Determining if Two Pages are Affiliated
Fig. 10

